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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/510.116 02/22/00 MINERVINI

MMC1/0813

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A 804RP746
EXAMINER

EA STHOMARTUNIT	PAPER NUMBER
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2832 DATE MAILED:

08/13/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trad marks

Office Action Summary

Application No.

09/510,116

Applicant(s)

MINERVINI ET AL.

Examiner

Karl D Easthom

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7,8,10-16 and 18-42 is/are pending in the application.
- 4a) Of the above claim(s) 33-37 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-32 and 38-42 is/are allowed.
- 6) ☒ Claim(s) 1-5,7,8,10-16 and 18-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 12.

- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

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1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 10 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 10 depends from canceled claim 9.

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 1-5, and 10-15 are rejected under 35 U.S.C. 102(a) as being anticipated by Kojima et al. (W098/29879). The claimed invention is disclosed at Fig. 1A, where 16a, 16b are the first and second supporting substrates, and the only one electrodes are the longer portions of 13a and 13b on a first surface of the respective substrates. (The shorter portions of the electrodes are not on the first surface, where if anything, they are on another surface by merely touching the surface.) In claim 11, the second electrode is the shorter electrode on the second surface of substrate 16b, with second PTC element 11c and third supporting substrate 11b. See Fig. 1b.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al. (W098/29879) in view of McGuire et al. 403. Kojima discloses the claimed invention except the materials claimed. Any ceramic, dielectric or other material is disclosed at the top of col. 8 of McGuire, and where copper is disclosed for the electrodes at col. 5, lines 5-12, the insulating layer is deemed a copper clad PC board since it can be used as a PC board and no other printed circuits are on same. It would have been obvious to replace the well known equivalent materials in the electrical resistor arts for each other to insulate and conduct electricity for the purpose of employing well known replacement parts during shortage of other equivalent parts.

5. Claims 1-5, 8, 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda in view of Niihara (JP 6-69416). Yoneda discloses the claimed invention at Fig. 6 except the PTC element material being polymer and the electrodes not extending to the other end. Niihara discloses that polymer PTC resistors are useful for replacing ceramic thermistors such as that of Niihara at par. 16 in order to form a reduced size, and it would have been obvious to employ the material for that purpose. Yoneda discloses at another embodiment Fig. 9 electrodes 20 not extending to both ends of the PTC element, and it would have been obvious not to do so for the purpose of controlling the resistance.

6. Claims 16, 18-19, 23-25 rejected under 35 U.S.C. 103(a) as being unpatentable over Sunahara 4-150001 in view of Niihara (JP 6-69416). Sunahara et al. discloses the claimed invention at Fig. 1 or 2 except forming the device of polymer. Niihara discloses that polymer PTC resistors are useful for replacing ceramic thermistors such as that of Niihara at par. 16 in

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order to from a reduced size. Elements 28a-c of Sunahara et al comprise the insulating substrates with first and second electrodes 30a and 30e, with second substrate 28c. . In claim 26, Sasaki discloses that any number of layers can be selected at col. 5, lines 18-25. In claim 15, it would have been obvious to replace the electrodes with foil for forming a good bond to the polymer, both disclosed in Niihara and suggested thereat for that purpose. In claim 22, tin is disclosed at col. 6 for the terminals 22.

7. Claim 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sunahara et al. with Niihara et al., as applied to claim 16 above, further in view of McGuire et al. The noted art disclose the claimed invention as noted above except the terminals of copper or tin and multiple alyers.. McGuire suggests multiple layers of copper and tin (see claim 27 therein – solder has tin, and fig. 3) as standard for circuit board mounting, and it would have been obvious to employ the materials for that reason.

8. Claims 26-32 and 38-42 allowed.

9. Applicant's arguments filed 4/23/01 have been fully considered but they are moot, or persuasive only in part, as indicated by the allowable claims.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is 703 308-3306. The examiner can normally be reached on M-Th, 5:30AM-4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Gellner can be reached on 703 308-1721. The fax phone numbers for the organization where this application or proceeding is assigned are 703 308-7722 for regular communications and 703 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0956.


Karl D Easthom
Primary Examiner
Art Unit 2832

KDE
August 9, 2001